



**Engine Tank 1-28**

**2001**

HME / Central States

**19 Years old**

**Manufacturer is out of business.**

Major structural failures of body and sub frame components.

Second failure of body sub-frame in 5 years.

Frame rail rot issues.

Major cracks and failures of body components.

Pump / piping failures.

Valve replacement and pump work needed.

**\$85,000.00** plus **10K** to **15K** additional for unforeseen issues.

**2016 Strategic Plan noted replacement date of 2019.**

***\*\*\* Vehicle is not capable of any extended service life. \*\*\****

# **E.T. 128 is the first due Attack Engine from HQ.**

## **2001 HME/CENTRAL STATES**

DETROIT SERIES 60 12.7L (500HP) & ALLISON HD-4060

HALE QMAX 2,000 GPM PUMP

1,000 GALLON TANK

HALE FOAM MASTER A/B 60 GALLON FOAM SYSTEM

150' 1-3/4" with variable stream nozzle

150' 1-3/4" with variable stream nozzle

200' 1-3/4" with smooth bore nozzle 15/16"

200' 2-1/2" with variable stream nozzle

250' 2" with variable stream nozzle

300' 2" with smooth bore nozzle 1-1/8"

200' 3" stinger

300' Dead lay with a gated Y for yard lay

1,500" 5" LDH supply hose

8 SCBA

10 Kw Generator diesel

PPV Fan

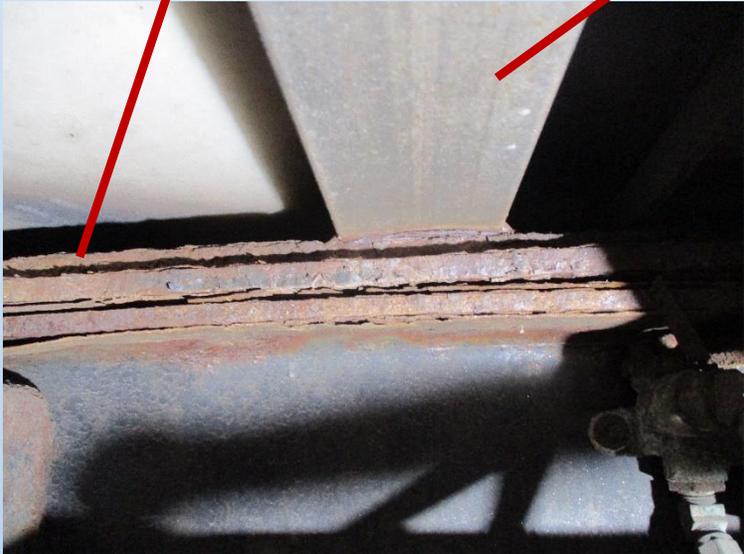
Electric smoke ejector

Medical response equipment -AED



# Body Sub Structure / Component Failures

Frame rail rot



Sub-Structure



Frame rail rot



*The sub-structure that hold the water tank and body was replaced due to failure in January 2016 and it has structurally failed again.*



**1997**

LTI Simon Duplex

**23 Years Old**

Beyond its service life of 20 years.  
*Rot / frame rail issues have started!*

Tubular, mild steel ladder.

Annual pump test failure.

23 year old black iron pump piping.

**2016 Strategic Plan noted replacement date of 2017.**

***Even with a Reserve unit status of 5 years, 2022 would be it's maximum service life.***

## **LADDER 128**

### **75' AERIAL TRUCK / QUINT (Ladder Truck with a pump and water tank)**

#### **1997 SIMON DUPLEX**

ENGINE DETROIT SERIES 60

TRANS. ALLISON HD4060P

SIMON LADDER AH-75

1,500 GPM WATEROUS PUMP

500 GALLON TANK

600" 5" LDH supply hose

400" 3" supply hose

150' 1-3/4" with variable stream nozzle

200' 1-3/4" with smooth bore nozzle 15/16"

200' 2-1/2" with variable stream nozzle

5 SCBA

7.5 Kw generator Diesel

PPV Fan

Electric smoke ejector

(2) Vent saws

(1) Rescue Saw

Ground Ladders

•24' 2 fly

•35' 2 fly

•14" roof

•16" roof

•10' Closet

•12' Closet



**Engine Tank 3-28**

**1988**

Simon Duplex/ Young

**32 Years Old**

Non NFPA Compliant.

**Open Cab**

Chassis is no longer OEM supported

Major Pump, Valve and piping failures.

\$58,000.00 repairs in 2019.

**2016 Strategic Plan noted replacement date of 2008.**

**\*\*\*\*\* Reserve unit 5 years 2013 maximum service life. \*\*\*\*\***

# E.T. 328 is the second due engine from Hq.

1988 SIMON DUPLEX / YOUNG

OPEN CAB

- DETROIT 8V92T / ALLISON HT740
- 1,750 GPM HALE PUMP
- 1,000 GALLON TANK
- 60 GALLON FOAM TANK
- 150' 1-3/4" with variable stream nozzle
- 150' 1-3/4" with variable stream nozzle
- 200' 1-3/4" with smooth bore nozzle 15/16"
- 200' 2-1/2" with smooth bore nozzle 1-3/8"
- 250' 2" with variable stream nozzle
- 300' 2" with smooth bore nozzle 1-1/8"
- 200' 3" stinger
- 300' Dead lay with a gated Y for yard lay
- 800" 5" LDH supply hose
- 10 Kw Generator PTO
- PPV Fan
- 5 SCBA
- Medical response equipment

- ❑ 2019 Piping / plumbing replacement, valves rebuilt and water tank cradle replaced.
- ❑ 2016 Pump Shaft and packing replacement. Front suction rebuild





**1987**

IH/Middlesex

**33 Years old**

Annual pump test failure.

Pump / Valve / failures

Water tank Rotted.

01 -2020 work done by fleet to  
“patch” it together for limited  
service.

***2016 Strategic Plan noted replacement date of 2007. Reserve unit 5 years 2012 maximum service life.  
Vehicle to be replace with a large capacity tanker.***

# **H.T. 128 HOSE TENDER / PUMPER**

**Rural Water Supply Engine**

**1987 I.H.C. MODEL 1854 4X4**

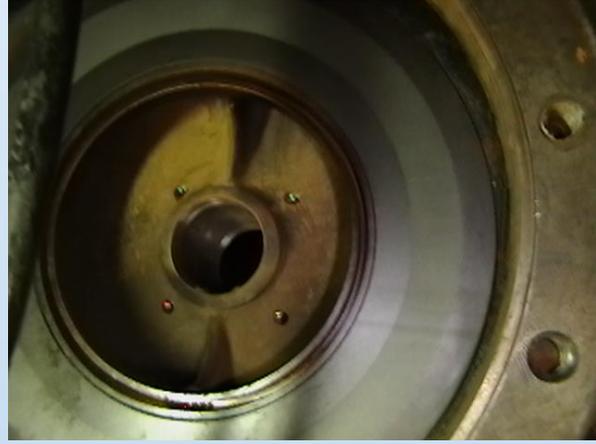
DT 466 ENGINE / MT643 TRANS

1,250 DARLEY PUMP / 500 GALLON TANK

2,100 FT 5" HOSE ON REEL

150' 1-3/4" with variable stream nozzle

200' 1-3/4" with smooth bore nozzle 15/16





**Engine Tank 4-28**

**1982**

American La France

**38 Years Old**

**Open Cab** – Beyond Refurb

Non NFPA Compliant.

Chassis is no longer OEM supported

Pump / Valve / piping failures. \$6,000.00  
in repairs in 2020

**2016 Strategic Plan noted replacement date of 2002.**

**\*\*\*\* Reserve unit 5 years 2007 maximum service life \*\*\*\***

- **E.T. 428 (reserve) ATTACK ENGINE**
- **1982 OPEN CAB**
- **AMERICAN LAFRANCE, CENTURY**
  - DETROIT 8V71 / ALLISON HT 740
  - 1,250 GPM PUMP
  - 1,000 GAL TANK
  - 150' 1-3/4" with variable stream nozzle
  - 200' 1-3/4" with smooth bore nozzle 15/16"
  - 200' 2-1/2" with smooth bore nozzle 1-3/8"
  - 250' 2" with variable stream nozzle
  - 300' 2" with smooth bore nozzle 1-1/8"
  - 200' 3" stinger
  - 300' Dead lay with a gated Y for yard lay
  - 1,500' 5" LDH supply hose
  - 7.5 Kw generator Gas
  - Electric smoke ejector
  - 3 SCBA

The average age of these (5)  
front line pieces of apparatus  
protecting Colchester is  
28.83 years old.

# Also in service with a Average Age of 14.3 Years



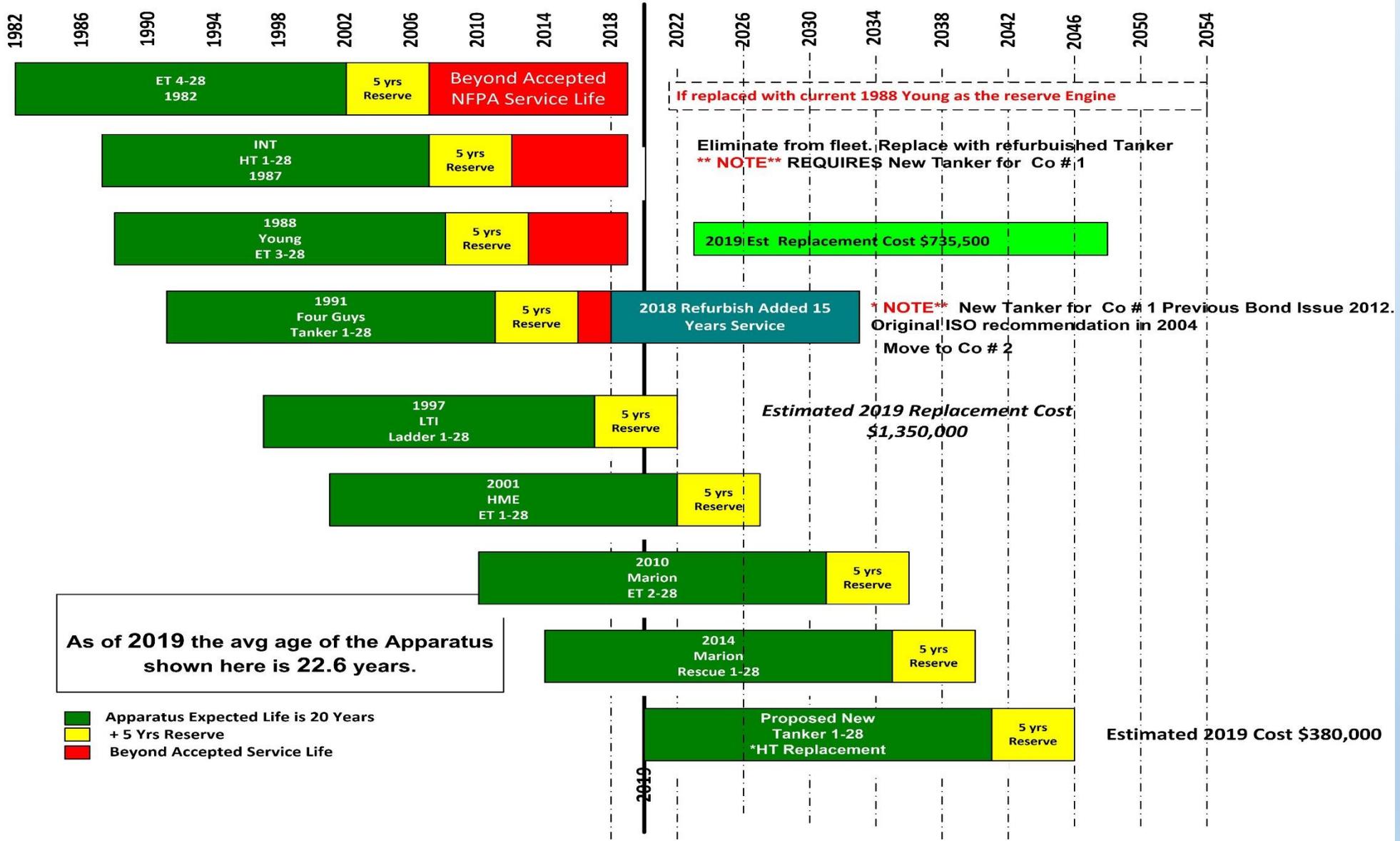
Engine Tank 2-28  
2010  
Marion/Spartan/  
Gladiator  
**9 Years Old**  
Company Two  
Westchester



Rescue 1-28  
2014  
Spartan/Marion  
6 Years Old



Tanker 1-28  
1992  
4 Guys/ Kenworth  
**28 Years Old**  
Re-furbished in 2018



Expected ET Life is 20Yrs service(Green) + 5 Yrs Reserve(Yellow)

So where are we today?

## Fire Apparatus status / condition as of 01/2020

Make/Model	Year	Age (years)	ID	Suggested Replace Yr.	<u>2016</u> <i>Strategic Plan Comments</i>	2019 / 20 Condition / Concerns
American La France	1982	38	ET 428	2002	Open Cab – Beyond Refurb	Non NFPA Compliant. Pump / Valve / piping failures. <b><u>\$6,000.00 in repairs in 2020</u></b>
IH/Middlesex	1987	33	HT 128	2007	Retire and replace with 3K Tanker	Pump / Valve / water tank Rot. Annual pump test failure.
Simon Duplex/ Young	1988	32	ET 328	2008	Open Cab – refurb and move to reserve	Non NFPA Compliant. Chassis is no longer OEM supported Major Pump, Valve and piping failures. <b><u>\$58,000.00 repairs in 2019.</u></b>
4 Guys/ Kenworth	1992	28	T 128	2028	Refurb and Relocate to Co. 2	Vehicle overhaul completed, “refurb” new pump, piping and upgrades done. <b><u>\$48,000.00 in 2018 (New service life noted)</u></b>
LTI Simon Duplex	1997	23	L 128	2017	Include in 5 year capital plan	Reached its service life. <u>Rot / frame rail issues</u> have started!
HME / Central States	2001	19	ET 128	2019	Include in 5 year capital plan	<u>Major structural failures</u> of body and sub frame components. Frame rail rot issues Pump / piping failure. <b>\$85,000.00 plus 10K to 15K</b> additional for unforeseen issues.
Marion/Spartan/ Gladiator	2010	10	ET 228	2030	Maintain	Pump and valve work 01/2020
Spartan/Marion	2014	6	R 128	2034	Maintain	
IH Horton Ambulance	2007	13	A 628	2017	Beyond service life	
Ford Lifeline Ambulance	2018	2	A 528	2028	CIP	

Make/Model	Year	Age (years)	ID	Status as of 02/19/2020	Suggested action	If Action taken Replace Yr.	Cost	Impact
American La France	1982	38	ET 428	In service as reserve covering O.O.S. apparatus	Sell 1982 engine upon receipt of new engine.	2030	\$735,500.00 Bond ?	Be replaced with purchase of engine. Pump Valve repair complete Feb 2020 invoice \$8,170.76
IH/Middlesex	1987	33	HT 128	Limited duty due to many failures (limited pumping only)	Remove from service. Replace with 2,000 gallon Tanker	2040	\$335,000.00 Stay with the plan. Replace with C.I.P. lease purchase 2020?	Replace with 2,000 gallon tanker. Locate at HQ
Simon Duplex/ Young	1988	32	ET 328	In service as 2 <sup>nd</sup> due engine	Sell, upon receipt of replacement engine.	2045	\$735,500.00 Stay with the plan. Replace with C.I.P. lease purchase 2020?	
4 Guys/ Kenworth	1992	28	T 128	In service at HQ	Move to Co # 2 replacing the Hose Tender. Upon receipt of new tanker.	2028	Continue with C.I.P replacement	Current 4 Guys/ Kenworth tanker move to Co # 2 Refurbished 2018 \$48,000.00
LTI Simon Duplex	1997	23	L 128	In service at HQ. In need of pump repair.	<u>Discussion Needed</u>	2017	\$1,350,000.00 Bond?	
HME / Central States	2001	19	ET 128	Short term replacement Town of Clinton Engine	Was to become reserve Engine 4-28 replacing 1982 Engine! <b>NOT NOW DUE TO FAILURES</b>			Borrowing apparatus from other communities. Limited capabilities Only has (2) Attack lines
HME / Central States	2001	19	ET 128	Out of Service Major Failures	<b>Short term repairs? \$\$\$</b>	2045	\$735,500.00 Bond ?	Replace
Marion/Spartan/ Gladiator	2010	10	ET 228	In service at Co #2	Remain in Service Co # 2 Westchester	2030	Continue with replacement C.I.P	Pump / Valve repair complete Feb 2020 invoice \$14,155.39
Spartan/Marion	2014	6	R 128	In service at HQ	In Service at HQ.	2034	Continue with replacement C.I.P	
IH Horton Ambulance	2007	13	A 628	In service at HQ	Sell, upon receipt of replacement ambulance 2020	2030	\$325,000.00	
Ford F550 / Lifeline Ambulance	2018	2	A 528	In service at HQ	Remain in Service at HQ.	2028 ?	Continue with replacement C.I.P <b>Questioning service life ?</b>	Lighter chassis than the international truck chassis.

# Options and Cost

## February 2020

Apparatus	Year Make	20 years	+5 years reserve
<b>Engine Tank 1</b>	2001 HME Central states	<b>2021 Failure</b>	
<b>Engine Tank 2</b>	2010 Spartan Marion	<b>2030</b>	2035
<b>Engine Tank 3</b>	1988 Duplex Young	<b>2008</b>	2013
<b>Hose Tender</b>	1987 INT Middlesex	<b>2007</b>	2012
<b>Engine Tank 4</b>	1982 American LaFrance	<b>2002</b>	2017
<b>Ambulance</b>	2007 INT Horton	10 year replacement 2017	No reserve

<b>Ladder 128</b>	1997 Duplex LTI	<b>2017</b>	No reserve
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**Option 1**  
**(1) Engine / (1) Tanker (HT replacement)**  
**(1) Ambulance**  
**EST. Cost \$ 1,385,000**

Apparatus	Year Make	20 years	+5 years reserve
Engine Tank 1	<b>2020 Engine (NEW)</b> Delivery in spring 2021	2040	2045
Engine Tank 2	2010 Spartan Marion	2030	2035
Engine Tank 3	1988 Duplex Young	2008	2013
New Tanker	<b>2020 Tanker (NEW)</b> Delivery in spring 2021	2040	2045
Engine Tank 4	1982 American LaFrance	2002	2017
<b>Ambulance</b>	<b>2020 Ambulance (NEW)</b> Delivery in spring 2021	<b>2030</b>	<b>No reserve</b>
<b>Ladder 128</b>	<b>1997 Duplex LTI</b>	<b>2017</b>	<b>No reserve</b>

**Option 2**  
**(2) Engines / (1) Tanker (HT replacement)**  
**(1) Ambulance**  
**EST. Cost \$ \$2,120,000**

Apparatus	Year Make	20 years	+5 years reserve
Engine Tank 1	2020 Engine (NEW) Delivery in spring 2021	2040	2045
Engine Tank 2	2010 Spartan Marion	2030	2035
Engine Tank 3	1988 Duplex Young	2008	2013
New Tanker	2020 Tanker (NEW) Delivery in spring 2021	2040	2045
Engine Tank 4	2020 Engine (NEW) Delivery in Fall 2021	2040	2045
Ambulance	2020 Ambulance (NEW) Delivery in spring 2021	2030	No reserve
Ladder 128	1997 Duplex LTI	2017	No reserve

**Option 3**  
**(3) Engines / (1) Tanker (HT replacement)**  
**(1) Ambulance**  
**EST. Cost \$ \$2,855,000**

Apparatus	Year Make	20 years	+5 years reserve
Engine Tank 1	2020 Engine (NEW) Delivery in spring 2021	2040	2045
Engine Tank 2	2010 Spartan Marion	2030	2035
Engine Tank 3	2021 Engine (NEW) Delivery in Fall 2021	2040	2045
New Tanker	2020 Tanker (NEW) Delivery in spring 2021	2040	2045
Engine Tank 4	2021 Engine (NEW) Delivery in Fall 2021	2040	2045
Ambulance	2020 Ambulance (NEW) Delivery in spring 2021	2030	No reserve
Ladder 128	1997 Duplex LTI	2017	No reserve

**Both cost and operational benefits to a fleet purchase of Engines.  
 Staggered Delivery**

**None of the options presented, address the ladder truck replacement issue.**

<b>Apparatus</b>	<b>Year MFG</b>	<b>Replacement 20 years</b>	<b>Reserve status</b>
Ladder 128	1997 Duplex LTI	2017	No reserve

**Estimated replacement Cost \$1,350,000.00**

